

AM4016093

Stochastic methods connected with the compilation of Fokker-Planck equations are used in this book for the first time to solve problems in structural mechanics. The end results are presented in a form convenient for use of engineering designers and scientific workers. Formulas are derived for the average and mean-square values of displacements for nonlinear and nonlinear-parametric elastic systems. Tests on models at $1/5$ -- $1/6$ size have confirmed the results of the theoretical research. The author is deeply grateful to R. L. Stratonovich and S. M. Targ who reviewed the manuscript and made many valuable comments, to G. A. Geniyev and M. I. Estrin for remarks concerning the manuscript, to I. I. Gol'denblat for interest in the work and advice, and to A. P. Sidorov for great help with the experiments.

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Card 3/3

VORONTSOV, N.M.; GUMIN, I.V.; NIKOLAYENKO, N.A.; SHENYEROV, B. Ya., and.
tekhn. nauk; GOVOR, U.S.

Rolls for rolling lightweight channels. Sbor. trud. UNIM
no.9:196-216 '64 (MIRA 12:1)

L 55159-65 EWT(d)/EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EWG(v)/EWP(c)/EWA(d)/EWP(v)/
 EPR/EWP(j)/I/EWP(t)/EWP(k)/EWP(h)/EPA(bb)-2/EWP(z)/EWP(b)/EWP(l)/EWA(h)/EWA(l) Pc-4/
 Pe-5/Pf-4/Rr-4/Ps-4/Pt-7/Peb IJP(c) JD/WH/HW/EM/RM 70
 AM5013205 BOOK EXPLOITATION UR/ 73
 621:539.4.001.24:536.4 8+1

Bezukhov, N. I.; Bazhanov, V. L.; Gol'ca, I. I. (Doctor of
 Technical Sciences; Professor); Nikolayenko, N. A.; Sinyukov, A. M.

Calculations of strength, stability, and vibrations under high tem-
 perature conditions (Raschety na prochnost', ustoychivost' i
 kolebaniya v usloviyakh vysokikh temperatur) Moscow, Izd-vo
 "Mashinostroyeniye" 1965. 0566 p. illus., biblio. Errata slip
 inserted. 6000 copies printed.

TOPIC TAGS: structure strength, structure stability, structure
 vibration, thermal elasticity, thermal plasticity, creep thermal
 stress

PURPOSE AND COVERAGE: This book is intended for engineer-designers
 and scientific workers. It may also be used by students of schools
 of higher technical education as a supplementary text for studying
 the theory of thermal stresses. Methods of calculating the strength,
 stability, and vibration of structures used in machine-building
 which are exposed to large high-temperature gradients are described.

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Card 6/6

NIKOLAYENKO, N.A., POLIKHAY, A.S.

Clay-acid treatment of wells in the Carpathian Mountain region.

Neft. i gaz. prom. no. 2012-45 Aktya '65.

(MIRA 18:6)

LOSKUTOVA, Ye.A.; NIKOLAYENKO, N.F.

Effect of neural factors on the thyroid function of rats of various
ages. Probl. endok. i gorm. 6 no. 4:24-28 J1-Ag '60.

(MIRA 14:1)

(THYROID GLAND) (AGING) (NERVOUS SYSTEM)

NIKOLAYENKO, N.F.

Changes in the absorption of radioactive iodine by the thyroid gland
during potassium perchlorate therapy and during its combination
with the use of 6-methylthiouracil. Probl. endok. i gorm. 6
no. 4:102-106 J1-Ag '60. (MIRA 14:1)

(POTASSIUM PERCHLORATE) (URACIL) (HYPERTHYROIDISM)
(IODINE METABOLISM)

NIKOLAYENKO, N.F.

Change in the absorption of radioactive iodine by the thyroid gland
during prolonged 6-methylthiouracil therapy. Probl. endok. i gorm.
6 no. 5:39-44 '60. (MIRA 14:1)
(HYPERTHYROIDISM) (IODINE METABOLISM)

BARANOV, V.G.; BLAGOSKLONNAYA, Ya.V.; NIKOLAYENKO, N.F.

Relation between neuroses and thyrotoxicosis. Terap.arkh. 32
no.12:24-29 '60. (MIRA 14:2)

1. Iz laboratorii vozrastnoy fiziologii i patologii cheloveka
(zav. - deystvitel'nyy chlen AMN SSSR prof. V.G. Baranov) Insti-
tuta fiziologii imeni I.P. Pavlova AN SSSR.
(NEUROSES) (HYPERTHYROIDISM)

NIKOLAYENKO, N.F.

Combined treatment of patients with toxic goiter by methylthio-
uracil and radioactive iodine (I-131). Klin.med. 38 no.7:73-78
'60. (MIRA 13:12)
(HYPERTHYROIDISM) (URACIL) (IODINE--ISOTOPES)

НИКОЛАЙЧУК, В. Ф.

Dissertation defended at the Institute of Physiology named I. P. Pavlov
for the academic degree of Candidate of Medical Sciences:

"Dynamics of Radioactive Iodine Absorption by the Thyroid Gland in the
Process of Extended Treatment with Methylthiouracil and Combination
Treatment with Methylthiouracil and Radioactive Iodine with Patients of
Toxic Goiter."

Vestnik Akad Nauk, No. 4, 1963, pp. 110-145

NIKOLAYEVA, V.V.; NIKOLAYENKO, N.F.

Cortical influences on thyroid function in experimental
neurosis in dogs. Zh. vyssh. nerv. deiat. Pavlov 13 no.3:
530-536 '63. (MIRA 17:9)

1. Laboratorii kortiko-vistseral'noy patologii i vozrastnoy
fiziologii i patologii cheloveka Instituta fiziologii im.
I.P. Pavlova Akademii nauk SSSR.

(NEUROSES) (THYROID FUNCTION TESTS)

(IODINE ISOTOPES, DIAGNOSTIC)

NIKOLAYENKO, N.F.

Role of the absorption curve by the thyroid gland in toxic
goiter patients in the evaluation of the stability of therapeutic
effects. Sov. med. 20 no. 1. 1964. 34-36. (VMA 12-3)

English translation available from the
National Library of Medicine, Bethesda, Maryland
1964

BARANOV, V.G.; NIKOLAYENKO, N.F.; STEPANOV, G.S.

Treatment of diffuse toxic goiter with potassium perchlorate combined with reserpine. Probl. endok. i gorm. 11 no.1:3-6 Ja-F '65. (MIRA 18:6)

1. Laboratoriya vozrastnoy fiziologii i patologii endokrinnoy sistemy cheloveka (zav. - prof. V.G. Baranov) Instituta fiziologii imeni Pavlova (dir. - akademik V.N. Chernigovskiy, AN SSSR i kafedra endokrinologii (zav. - prof. V.G. Baranov) Instituta usovershenstvovaniya vrachey imeni Kirova, Leningrad,

NIKOLAYENKO N.I.

"The Practical Value of Chloroform Vaccine in the Campaign against Foot-and-Mouth Disease". Sov. veterin., 1938, No 4 - 5. (Bibliography from article Foot and Mouth Disease by A. L. Skomorokhov, State Publishing House for Agricultural Literature, Moscow/Leningrad, 1947.)

SC: U-1625, 11 January 1952, 4 3'

NIKOLAYENKO N.I.

"Research on Biological Methods of Actively Combatting Foot-and-Mouth Disease".
Sborn. referatov nauchnoy konferentsii, t. II, Omsk, 1941. (Bibliography from
article Foot and Mouth Disease by A. L. Skomorokhov, State Publishing House
for Agricultural Literature, Moscow/Leningrad, 1947.)

SO: U-1625, 11 January 1952,

NIKOLAYENKO N.I.

"Vaccination of Cattle Against Foot-and-Mouth Disease" (in Ukrainian). Sots. tvarinnitstvo, 1941, No 4. (Bibliography from article Foot and Mouth Disease by A. L. Skomorokhov, State Publishing House for Agricultural Literature, Moscow/Leningrad, 1947.)

SO: U-1625, 11 January 1952,

NIKOLAYENKO, N. I. PROF

PA 161T83

USSR/Medicine - Paratyphoid
Sheep, Diseases

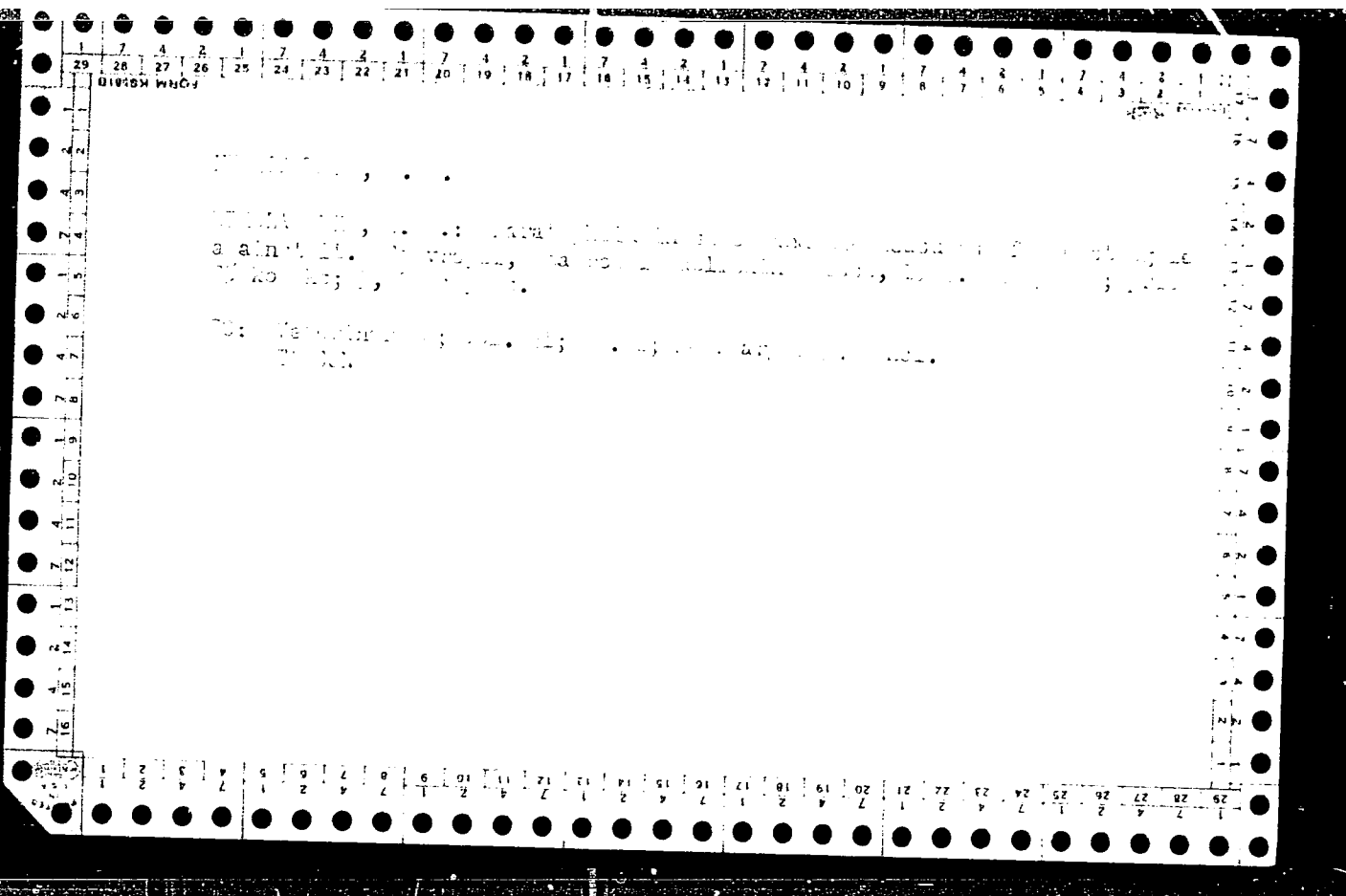
Jun 50

"Paratyphoid of Sheep and Measures of Control-
ling It," Prof N. I. Nikolayenko, Stavropol'
Agr Inst, A. I. Nefed'yev, Dr Vet Med, Stav-
ropol' Biologicals Plant, 1 1/2 pp

"Veterinariya" No 6 : 22

Tests virulence of strains of B. paratyphi
abortus ovis on sheep and results of various
methods of vaccination on resistance of sheep
to the disease.

161T83



USSR / Diseases of Farm Animals. Diseases
Caused by Bacteria and Fungi.

R-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7307

Author : N. I. Nikolayenko

Inst : Not Given

Title : Concerning the Prophylaxis of Paratyphoid of Sheep

Orig Pub: Tr. Stavropol'sk. s-kh. in-ta., 1956, vyp. 7, 299-306.

Abstract: A verification of the effectiveness of the formol-aluminous microbe anatoxin deposited vaccine, prepared from the strains of Salmonella ovis, showed that a two stage administration of the vaccine protects from infection 70.8 percent of the lambs vaccinated at the 6-30 day age, and 73.9 percent of the nursing ewes. On farms, having cases of paratyphoid, the author recommends the vaccina-

Card 1/2

15

NIKOLAYENKO, N.I., prof.

[Bacterial fertilizers] Bakterial'nye udobreniia.
Stavropol', Stavropol'skoe knizhnoe izd-vo, 1964. . . .
(MIRA 18:18)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.

BUSHUYEV, V.P.; GUBIN, G.V.; GONCHARENKO, Yu.I.; KARMAZIN, V.I.;
MARGULIS, V.S.; MITROV, V.A.; NIKOLAYENKO, N.O.; BOBRUSHKIN, L.G.;
BUROV, A.I.; RYBAKOV, V.N.; SOSHIN, A.F.; TATSIYENKO, P.A.;
TOVSTANOVSKIY, O.D.; YUROV, P.P.; Primali uchastiye:
NIFAGINA, A.A.; CHERNYY, I.I.; GERSHOYG, Yu.G.; KOSTIKOV, A.G.;
DOLGIKH, M.A.; MOVSKOVICH, S.A.; STUPIN, D.D.; NEVOYSA, G.G.

Magnetization roasting of Kerch ores in the experimental
factory of Kamysh-Burun Combine. Gor. zhur. no.12:30-37
D '62. (MIRA 15:11)

1. Institut Mekhanobrchermet, Krivoy Rog (for Bushuyev,
Gubin, Goncharenko, Karmazin, Margulis, Mitrov, Nikolayenko,
Nifagina, Chernyy, Gershoyg, Kostikov). 2. Kamyshburunskiy
zhelezorudnyy kombinat, Kerch' (for Bobrushkin, Burov,
Rybakov, Soshin, Tatsiyenko, Tovstanovskiy, Yurov, Dolgikh,
M.A.; Movskovich, S.A.; Stupin, D.D.; Nevoysa).
(Kerch Peninsula--Ore dressing)
(Iron ores)

NIKOLAYEVIC, N. P.

Nikolayenko, N. P. - "The effect the location of the ovaries of female plants has on the biological and decorative indicators of the same posterity," *Tr. Vses. nauch. konf. (Akad. kommunal. khoz.-va im. G. I. Gerasimova)*, Issue 1, 1979, p. 22-23.

SO: 0-1034, 20 Oct 79, (Leto is 'Zhurnal' by St. ley, No. 1, 1979).

NIKOLAIENKO, N. P.

Cultivation practices for growing ornamental plants in urban floriculture establishments
Moskva, Ministerstvo kommunal'nogo khoziaistva, 1954. 235 p.

NIKOLAYENKO, N.P.

[Perennials and roses in city landscaping] Mnogoletniki i rozy v
ozelenenii gorodov. Moskva, Ministerstvo kommunal'nogo khoziaistva
RSFSR, 1955. 239 p. (MLRA 9:9)
(Perennials) (Roses)

NIKOLAYENKO, N.S.

Signal amplifier equipped with transistors. Poluprov.prib. 1 kh
prim. no. 3:227-236 '58. (MIRA 12:4)
(Transistor amplifiers)

NIKOLAYENKO, M.S.; KALLIOPIN, G.V.

Amplifier with output connected to a reversible motor.
Poluprov.prib. i ikh prim. no.3:237-246 '58. (MIRA 12:4)
(Transistor amplifiers)

SOV/108-13-2-2/15

AUTHOR: Nikolayenko, M. S.

TITLE: **Direct-coupled Triode Transistor Amplifiers**
(Usilitel' na poluprovodnikovyykh triodakh s neposredstvennoy svyaz'yu)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 2. pp. 14 - 22 (USSR)
Received: April 25, 1958

ABSTRACT: The work carried out here showed that a **transistor** alternating current amplifier with galvanic intercascade connection can be produced, which is better with respect to the temperature than the ordinary amplifiers. Moreover many details are omitted here as transition condensers or transformers, base resistances for all cascades except the first. This increases the reliability of the scheme and in the case of broad-band or high-frequency amplifiers it improves the parameters of the scheme. The statements are demonstrated by means of a scheme. The alternation of cascades with common point in the emitter and collector permits to obtain a better temperature stabilization and a good conformity between the cascades, which on the other hand offers the possibility to

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SOV/108-13-2-2/15

Direct-coupled Triode Transistor Amplifiers

obtain a sufficient power amplification, even under application of transistors of average quality. The temperature stabilization of the whole amplifier is determined by the stabilization of the first cascade and a correct alternation of the semiconductor triodes in the scheme, if these show different values of the zero-collector-current. The advantages of this very simple scheme with a minimum number of particulars are shown. The scheme makes possible to produce transistor amplifiers, which are capable of working up to a temperature of 100 °C of the surrounding medium. - A calculation of the method of operation of the scheme is given. The values of the constant amperages and voltages are computed, which determine the method of operation and the temperature modifications of these values. At first the first cascade is investigated without considering the following cascades and it is shown that for a better temperature stabilization the low-resistance divider of R_1 and R_2 as well as of the highly resistive resistance R_3 in the emitter circuit are necessary. The total value of the input resistance is only determined by the load current. Then the suggested three-cascade scheme (as a whole) is investigated. It is shown that the influence

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SOV/108-13-2-2/15

Direct-coupled Triode Transistor Amplifiers

of the third cascade on the first can be neglected. The equation (38) for the temperature dependence of the collector voltage in the first triode and thus also of the operation of the emitters on the following cascades is derived. Equation (38) shows that the decrease of the collector voltage together with the temperature in the suggested scheme is always smaller than in an **individual** cascade, that is, with the same parameters. The computation shows that an amplifier with direct **coupling** can very easily be projected for the operation within a large temperature range. Then the computation of the power amplifier, beginning with the third cascade, is given. Summarily it is ascertained that the necessary quantity of the collector voltage of the following cascades can be obtained by lowering the load resistance, lowering the emitter amperage by inserting the divider in the preceding cascade (the basis of the respective cascade is connected to the center of load of which) and by a successive increase of the supply voltage from cascade to cascade. Such amplifiers have been constructed by the

Card 3/4

Direct-coupled ~~Triode~~ Transistor Amplifiers.

SOV/108-13-2-2/15

author and are in operation. Engineer G. V. Kallinikov and
Engineer Ye. I. Zhdanova participated in the work. There
are 8 figures, and 1 Soviet reference

SUBMITTED: July 8, 1957

Card 4/4

NIKOLAYENKO, N.S.

66209

SOV/146-59-1-4/21

~~0(a)~~ 9.2520

AUTHORS:

Tanskiy, Ye.A., Candidate of Technical Sciences, Docent, and
Nikolayenko, N.S., Senior Engineer

TITLE:

A Servo System With a Transistorized Amplifier

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1959,
Nr 1, pp 28-33 (USSR)

ABSTRACT:

The authors describe a servo system with a transistorized ac amplifier. The circuit diagram is shown in fig.1. The amplifier has two stages. One P1G and two P3V transistors are used. DG-Ts24 diodes are used as voltage limiters. The power amplification is about 53 db. The amplification factor at the outlet is around 400. The arrangement of the parts in the assembled amplifier is shown in fig.5. The experimental data on the frequency characteristic coincide with theoretical data. The efficiency of the output stage is about 60%. The transistors are installed for cooling purposes on aluminum radiators having a surface of 15 cm². The amplifier was built at the Kafedra avtomatiki i telemekhaniki (Department of Automation and Remote Con-

Card 1/2

SOV/120-59-2-40/50

AUTHORS: Bogomolov, V.N., Nikolayenko, N.S. and Fedotov, V.P.

TITLE: A D.C.-A.C. Converter Based on the Use of the Hall Effect
(Preobrazovatel' postoyannogo toka v peremennyy, osnovanny na ispol'zovanii effekta Kholla)

PERIODICAL: Priory i tekhnika eksperimenta, 1959, Nr 2.
pp 134-135 (USSR)

ABSTRACT: A cross-section through the device is in Fig 1. It is 40 mm in diameter and 40 mm high and consists of a permalloy screen surrounding a toroidal coil with a KhVP core. The coil is designed to accept 50 μ s at 6.3 V and draws 0.1 A. The power dissipation is 0.2 W. The semi-conductor wafer (5 x 3.5 x 0.3 mm³) of n-type 8 ohm cm germanium is secured by epoxy resin in an air gap in the core. It has an input resistance of 100 ohms and an output resistance of 500 ohms. The current conversion ratio DC-AC is 20%. The effective flux density is 15000 gauss. The voltage transfer coefficient is 1.2-1.3 per 1000 gauss of field. A compensating coil is also included, as in Fig 2, to increase sensitivity and thermal stability. The converter is intended for operation with the EPP-09 recording potentiometer. The systematic and random components of error are both 0.2%

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SOV/120-59-2-40/50

A D.C.-A.C. Converter Based on the Use of the Hall Effect

and the sensitivity is 5 micro watts. The temperature coefficient is 0.01 % per degree centigrade and the sensitivity falls with temperature. The converter is insensitive to $\pm 10\%$ change in supply voltage, $\pm 5\%$ change in supply frequency and the effects of moisture. It is suggested that the unit find application as a computing element or in a d.c. amplifier. V.I. Pogodin is thanked for his assistance.

Card 2/2 There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR
(Semiconductor Institute of the Ac. Sc. USSR)

SUBMITTED: April 5, 1958

NIKOLAYENKO, N.S., aspirant

Some circuits of semiconductor phase-sensitive devices. Izv.vys.
ucheb.zav.; prib. 2 no.5:20-25 '59. (MIRA 13:5)

1. Leningradskiy elektrotekhnicheskij institut imeni V.I.
Ul'yanova (Lenina). Rekomendovana kafedroy elektroizmeritel'noy
tekhniki.

(Transistors)

67463

SOV/146-2-4-1/19

~~9(4)~~ 94310

AUTHOR: Nikolayenko, N.S., Aspirant

TITLE: Semiconductor Transistor in a Phase-Sensitive System

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priboro-
stroyeniye, 1959, Nr 4, pp 3-11 (USSR)

ABSTRACT: This is a theoretical and experimental investigation of a semiconductor junction-type germanium transistor of the "p-n-p" type, trade mark "PI", in a phase-sensitive system whose principal circuit diagram is shown in figure 1. The working principle is described, and the experimental results are illustrated in graphs (Figure 2,3,4,5,6), showing the different relationships of the amplification coefficient of the transistor. Due to this research, a series of instruments on semiconductor transistors was developed, among them signal amplifiers, amplifiers with a connection to a relay, etc., all these instruments

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67463

SOV/146-2-4-1/19

Semiconductor Transistor in a Phase-Sensitive System

were described previously by the author /Reference 1 7.
This article was recommended by the Kafedra elektro-
izmeritel'noy tekhniki (The Chair of Electro-Measuring
Technique). There are 1 diagram, 5 sets of graphs,
and 1 Soviet reference.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni
V.I. Ul'yanova /Lenina/ (Leningrad Electrical Engineering
Institute imeni V.I. Ul'yanov /Lenin/).

SUBMITTED: April 14, 1959

Card 2/2

9(3,2)

SOV/146-2-5-3/19

AUTHOR: Nikolayenko, N.S., Post-Graduate Student

TITLE: Some Semi-Conducting Phase-Sensitive Devices

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priboro-stroyeniye, 1959, Nr 5, pp 20 - 25 (USSR)

ABSTRACT: The working principles and design calculations of phase-sensitive devices with semiconductor diodes and triodes are discussed. The following circuits,⁵ are investigated: the single-cycle phase-sensitive electrovacuum triode circuit (Figure 1); the two-cycle half-wave phase-sensitive circuit (Figure 2); the transformer load phase-sensitive circuit (Figure 4); the amplification cascade circuit fed by a pulsating current (Figure 5). The output circuits of all these phase-sensitive systems are fed by alternating current as mentioned previously by the author [Ref 1]. It is concluded that the calculation formulae for phase-sensitive cas-

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SOV/146-2-5-4/19

Some Semi-Conducting Phase-Sensitive Devices

calculated results are in close agreement with experimental results, and can therefore, be used for engineering purposes. All the circuits of phase-sensitive systems listed were applied in different instruments, e.g. signal amplifiers, relay output amplifiers, amplifiers with output to a reversible motor, phase-sensitive translators, etc. This article was recommended by the Kafedra elektrometritel'noy tekhniki (the Chair of Electrometering Technique). There are 4 diagrams, 1 graph, and 1 Soviet reference.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova/Lenina (The Leningrad Electrical Engineering Institute imeni V.I. Ul'yanov/Lenin)

SUBMITTED: July 7, 1959

Card 2/2

9(2)

S/146/59/002/06/003/016
D002/D006

AUTHOR: Nikolayenko, N.S., Engineer

TITLE: Semi-Conductor Phase-Sensitive Amplifiers With Relay Output

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1959, Nr 6, pp 17-22 (USSR)

ABSTRACT: The author gives design and performance information on two amplifiers: 1) An amplifier with an "RP-4" relay output (Figure 1 and 2, circuit diagram and photograph) working on 127 volt ac net ($\pm 10\%$), 50 cycles ($\pm 5\%$) and at a temperature range of the surrounding medium of $-30 - +60^{\circ}\text{C}$; it has a sensitivity of 0.5 millivolt at a transmitter resistance of approximately 1 kilohm, consists of 3 cascades with transformer connection built on "Pl3" low-power triodes. 2) An amplifier (Figure 5) with electro-



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S/146/59/002/06/003/016
D002/D006

Semi-Conductor Phase-Sensitive Amplifiers With Relay Output

magnetic relay output with a power of up to 3 watts; it works on the same voltage and frequency as the first amplifier in a temperature range of the surrounding medium of 0 to 50°C. Its performance was checked with the "RKN" relay which has a coil resistance of 220 ohms, and with the "MKU-48" relay which has a coil resistance of 320 ohms. Sensitivity with the "MKU-48" relay was 6 millivolts, and with the "RKN" 4 millivolts, and depended on the change of the surrounding temperature. The article was recommended by the Kafedra elektroizmeritel'noy tekhniki (Chair of Electrical Measurement Technology). There are 2 diagrams, 1 photograph, 2 graphs and 2 Soviet references.



ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova/Lenina (Leningrad Electrotechnical Institute imeni V.I. Ul'yanov/Lenin)

SUBMITTED: November 24, 1959
Card 2/2

9(4)

AUTHORS:

Andreyev, A. A., Engineer, Nikolayenko, M. S., Engineer

SOV/119-59-9-2/19

TITLE:

Semiconductor Amplifiers for Automatic Measuring Devices

PERIODICAL:

Priborostroyeniye, 1959, Nr 9, pp 6-8 (USSR)

ABSTRACT:

In circuits of automation and control technique semiconductor diodes and triodes practically always replace vacuum tubes. Investigations made in the design office showed the possibility of using a scheme with direct coupling. In this connection the theoretical and experimental advantages of this type of circuit with inductance and capacity coupling were proved. In extension of work in this direction the design office developed amplifiers for automatic devices the output of which is connected to a reversible motor. These amplifiers have a simple and elegant circuit arrangement, and are highly sensitive and reliable in operation. To begin with, semiconductor amplifiers for alternating current were discussed. This apparatus is intended for use in automatic equipment, which measures physical parameters transformed into a.c.-signals. Apparatus of this type are, e.g. automatic bridges, potentiometers for a.c., induction instruments, etc. The amplifiers are suitable for Geiger-instruments

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Devices

SOV/119-59-9-2/19

and for recorders of all the calibrations provided by the GOST (All-Union State Standard). The circuit diagram of the amplifier is illustrated in a figure. The amplifier consists of 6 cascades. The authors then describe certain details of the circuit arrangement. The problem of stabilizing the temperature in circuits with direct coupling had been solved previously. The correctness of these deductions was proven experimentally for a circuit consisting of 5 cascades. The input amplifier was calculated by means of graphical-analytical methods. The sensitivity of the amplifier was controlled by means of an alternating-current resistance interconnected between the emitter and the base of the triode of the third cascade. The output cascade was also calculated by graphical-analytical methods, and its efficiency amounted to ~70%. Thus semiconductor triodes were applicable down to stray power of less than 1 w. The amplifier in question had a sensitivity threshold of approximately 1 microwatt at an input resistance of around 1,000 ohm. Thus an electric power of 10^{-15} w enters the amplifier. Apparatus equipped with specimens of this amplifier fit well into the 0.5 class. The semiconductor amplifier is

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adapted for operation in a surrounding medium at 0 - 60°C, performance being most dependable when maintained constantly in a medium at 60° C. The tests carried out in a factory gave good results. No trouble during operation has been experienced hitherto. The second part of the paper deals with a semiconductor amplifier for direct current, which is intended for use in automatic potentiometers and in d.c. bridges. It is distinguished from the above amplifier by containing a small size electromechanical oscillation transformer. The circuit diagram of the automatic recording potentiometer is given in a figure. This semiconductor amplifier is composed of miniature wireless parts, and contains miniature transformers, which were developed and produced in the design office. The semiconductor amplifier surpasses electronic amplifiers concerning all parameters. Besides, semiconductor amplifiers are ready for use practically immediately. At present the design office is testing a semiconductor amplifier having a feed back concerning speed, which is adapted for use in automatic recorders. The laboratory tests gave good results. There are 3 figures and 1 table.

Card 3/3

S/194/61/000/011/061/070
D271/D302

9.2520

AUTHOR: Nikolayenko, N.S.

TITLE: Types of feedback in transistor amplifiers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika.
no. 11, 1961, 14, abstract 11 K106 (V sb. Poluprovod-
nik. pribory i ikh primeneniye, no. 6, M., Sov. ra-
dio, 1960, 235-253)

TEXT: A graphical method is proposed for designing low-
frequency transistor amplifiers with feedback; the method is based
on two transistor parameters; current gain K ; and input resistance
 R_{in} in the common emitter circuit. The parameters are functions of
the collector and load current, and fully describe the amplification
properties of transistors. Various types of feedback are considered:
Series, parallel, combined, selective and non-linear, as well as
current and voltage limiters. Non-linear semiconductor resistances
and semiconductor diodes are considered as non-linear elements. The

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Types of feedback...

S/194/61/000/011/001/070
D271/D302

methodology of design and application of limiters is indicated.
Results of experimental checking of formulae and their validity
limits are shown. [Abstractor's note: Complete translation]

←
B

Card 2/2

86651

S/119/60/000/011/007/009
B012/B054

9.6000 (1067, 1099, 1159)

AUTHORS: Nikolayenko, N. S. and Shaposhnikov, V. B.

TITLE: Scaling Device Made From Semiconductor Triodes for the Integrator

PERIODICAL: Priborostroyeniye, 1960, No. 11, pp. 18 - 20

TEXT: The authors describe a phase-sensitive device with semiconductor triodes which can be used as scaler in a thermometric integrator. The mode of operation of the integrator is based on the successive summation of time spaces which are proportional to the temperature measured at each point of time. The said device with semiconductor triodes serves for amplifying and transforming the a.c. signal. The phase of this signal corresponds to the position in which the signal taken up by the synchronously rotating rheochord, and compared with the signal proportional at the respective moment of the object temperature, is weaker than the reference signal. The difference signal with a frequency of 50 cycles is transformed to impulses with 1.56 cycles. These impulses are fixed when the relay responds. The relay operates the mechanical counter which works

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Scaling Device Made From Semiconductor
Triodes for the Integrator

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B012/B054

at an input signal of a certain phase. The number of impulses is proportional to the amount of heat. The present device is intended for temperatures of the medium between 0 and 50°C. Fluctuations of the feeding voltage amount to $\pm 10\%$, those of the frequency to $\pm 5\%$; they do not affect the work of the device. The threshold of sensitiveness is $10 \mu\text{v}$. It is pointed out that it is possible to construct an integrator with a minimum number of contacts and very small dimensions with the aid of semiconductor diodes and triodes. The cost of such a device is, however, very high (synchronous motor!) as compared with usual scaling devices. The figure shows the basic circuit diagram of the device, and the table the rated values of resistors and capacitors. The power preamplifier consists of five stages. At its input, there is a transformer with a transformation ratio of 1:1. The circuit scheme of the amplifier is similar to that described in Ref. 1. The graphical-analytical method of Ref. 2 was used to calculate the power amplification factor. The amplification factor is 100 db. The input signal amplified by the preamplifier passes over an intermediate transformer to the phase-sensitive stage, and then to the formation stage where rectangular impulses are formed. The formed impulse then reaches the input of the 5-cell scaling circuit, each cell being a

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00051

Scaling Device Made From Semiconductor
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B012/B054

trigger with two stable positions. A model of the circuit described was made and tested. The test showed that the device guarantees perfect and reliable work; if the production cost could be reduced it would be widely used. There are 1 figure, 1 table, and 5 Soviet references.

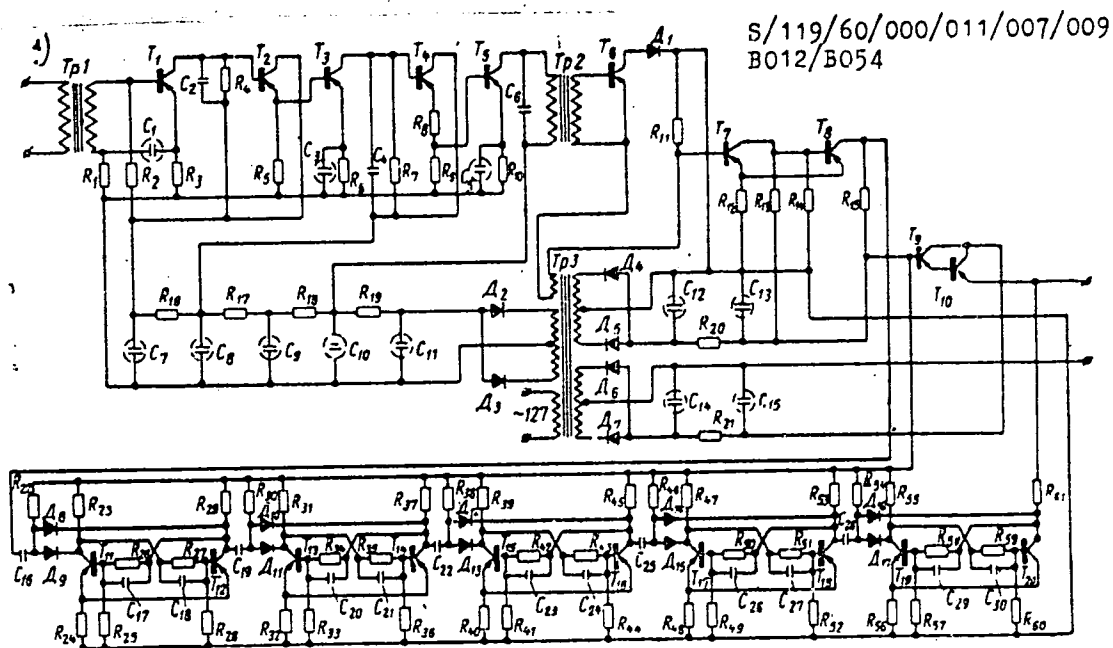
Legend to the figure: Basic circuit diagram of the phase-sensitive device with semiconductor triodes; $T_1 - T_{20}$ triodes, $\Pi_1(D_1) - \Pi_{17}(D_{17})$ diodes.

1) Transformer.

Legend to the table: Rated values of resistors and capacitors: 1) Resistor, 2) value of resistance in kilohms, 3) capacitor, 4) value of capacitor in microfarads, 5) value of capacitor in picofarads, 6) Note. All resistors are of the УЛМ (ULM) type; the capacitors $C_2, 4, 6$ are of the МММ (МММ) type; the capacitors $C_1, 3, 5, 7, 9, 10, 11, 12, 13, 14, 15$ of the ЕТО (ETO) type, and the capacitors C_{16-30} of the БМ (BM) type.

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Card 4/5

Принципиальная схема фазочувствительного пересчетного устройства на полупроводниковых триодах:
T₁ - T₁₀ - триоды; D₁ - D₁₇ - диоды.

Номинальные значения сопротивления и конденсаторов

Card 5/5

4) Сопротивление	2) Значение сопротивления в Ом	3) Конденсатор	4) Значение конденсатора в пФ
R ₈ , 12, 21, 32, 40, 48, 56	0,51	C ₂	0,1
R ₁₀ , 19	1,0	C _{4, 6}	0,5
R ₁₁	1,5	C _{10, 11}	15,0
R ₁ , 3, 16, 17, 18, 20, 21	2,4	C _{9, 12, 13, 14, 15}	20,0
R ₉ , 13, 15, 23, 29, 31, 37, 39	3,0	C _{1, 8}	30,0
R ₄₅ , 47, 53, 55, 61	3,0	C _{3, 7}	50,0
R _{5, 6}	5,1	C ₅	80,0
R ₁	12,0	C ₁₆₋₃₀	1000
R ₂	15,0		
R ₂₆ , 27, 34, 35, 42, 43, 50, 51, 58, 59	20,0		
R ₁₄ , 25, 33, 36, 41, 44, 49, 52	75,0		
R ₅₇ , 60	75,0		
R ₂₂ , 30, 38, 46, 54	100,0		

6) Примечание. Все сопротивления типа УДМ; конденсаторы типа КВМ; конденсаторы C₁₁, C₁₂, C₁₃, C₁₄, C₁₅, C₁₆, C₁₇, C₁₈, C₁₉, C₂₀, C₂₁, C₂₂, C₂₃, C₂₄, C₂₅, C₂₆, C₂₇, C₂₈, C₂₉, C₃₀ типа БМ.

86651

S/119/60/000/011/007/009
B012/B054

NIKOLAYENKO, M.S.

Semigraphical method of calculating low-frequency transistor
amplifiers. Radiotekhnika 15 no.7:51-59 J1 '60.
(MIRA 13:7)

(Transistor amplifiers)

NIKOLAYENKO, N. S., CAND TECH SCI, "SEMICONDUCTOR AMPLIFIERS WITH ^{intercascade} INTERCASCADE CONNECTION AND THEIR APPLICATION IN MEASURING EQUIPMENT." LENINGRAD, 1961. (MIN OF HIGHER AND SEC SPEC ED RSFSR. LENINGRAD INST OF AVIATION INSTRUMENT ^{MA} ~~MA~~ ^{KL-DV} ~~KL-DV~~). (KL-DV, 11-61, 221).

-172-

S/146/61/004/006/003/020
D249/D301

AUTHORS: Nikolayenko, N. S. and Fedotov, V. P.
TITLE: Current converters with semiconductor triodes
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 6, 1961, 17-25

TEXT: A general description is given of converters of small d.c. signals into a.c. signals by semiconductor triodes which is compiled from literature. Characteristics of the semiconductor triode as a converter, compensation of residual parameters and characteristics of the converter in amplifier circuits for direct current are considered. There are 6 figures and 17 references: 4 Soviet-bloc and 13 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: A. Gill, Transistor Switch design, Electronics, 1958, XII no. 49, 97; R. B. Hurley, Transistorized low-level choppers circuits, Electr. Industry, no. 12, 1956; B. T. Barber, L. S. Klivan, Servo Modulators - III, Semiconductor modulators, magnetic modulators, tabulated character-

Card 1/2

9.2560 (1040, 1154, 1161)

AUTHOR: Nikolayenko, N. S.

27780

S/106/61/000/008/004/006

AO55/A127

TITLE: Selecting transistorized amplifier circuits

PERIODICAL: Elektrosvyaz', no. 8, 1961, 40-46

TEXT: Eight different transistorized amplifier circuits (with capacitive, transformer or direct coupling) are analyzed, and their power amplification factor is calculated. The grapho-analytical method is used [Ref. 2: N. S. Nikolayenko. "Grafoanaliticheskiy metod rascheta nizkoshastotnykh usiliteley na poluprovodnikovyykh triodakh" (Grapho-analytical method for calculating 1-f transistorized amplifiers), Radiotekhnika, 1960, no. 7], i.e. the transistor parameters are taken from their characteristics:

$$K_1 = f_1(I_k) \text{ at } R_e = \text{const.}$$

$$R_{\text{inp}} = f_2(I_k) \text{ at } R_e = \text{const.}$$

In all the analyzed circuits, germanium transistors of the "P13", "P13A" and "P9A" types are used. A one-stage amplifier with a capacitive input is shown. Calculating the power transmission coefficient, first from the signal generator

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S/106/61/000/008/004/006

A055/A127

Selecting transistorized amplifier circuits

to the divider resistance, then from the divider resistance to the input resistance of the stage, the author finally obtains the total power transmission coefficient:

$$m = \frac{r_{gen}}{r_{gen} + Z^*} \frac{R_{div}}{\sqrt{(R_{div} + R_{inp})^2 + \left(\frac{K_1}{\omega C_2}\right)^2}} \quad (5)$$

where

$$R_{div} = \frac{R_1 R_2}{R_1 + R_2} \quad (3)$$

and

$$Z^* = \frac{R_{div} \sqrt{R_{inp}^2 + \left(\frac{K_1}{\omega C_2}\right)^2}}{\sqrt{(R_{div} + R_{inp})^2 + \left(\frac{K_1}{\omega C_2}\right)^2}} \quad (2)$$

R_{inp} being the transistor input resistance. The power amplification factor of the stage with common emitter point is:

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Selecting transistorized amplifier circuits

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AO55/A12

$$K_p = \frac{k_1^2 Z_1}{Z_{inp}} = \frac{k_1^2 Z_1}{\sqrt{R_{inp}^2 + \left(\frac{k_1}{\omega C_2}\right)^2}} \quad (6)$$

and the power amplification factor of the circuit:

$$K_{Pl} = \frac{r_{gen} R_{div}}{(r_{gen} + Z^*) \sqrt{(R_{div} + R_{inp})^2 + \left(\frac{k_1}{\omega C_2}\right)^2}} \cdot \frac{k_1^2 Z_1}{\sqrt{R_{inp}^2 + \left(\frac{k_1}{\omega C_2}\right)^2}} \quad (7)$$

Under optimum conditions and with optimum parameters, the average gain is 30 db with an input resistance of 1 kilohm approximately. Then a one-stage amplifier with transformer coupling is shown. The power amplification factor of the circuit is here:

$$K_{n2} = \frac{\eta_{mp}}{2} \frac{k_1^2 Z_1}{R_{inp}} \quad (11)$$

where η_{mp} is the efficiency of the transformer. The gain reaches 35 db. The

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Selecting transistorized amplifier circuits

input resistance can vary, depending on the parameters of the input transformer. Another figure shows a two-stage amplifier with direct coupling and with p-n-p type transistors. The temperature stabilization conditions were examined by the author in another article [Ref. 1. "Usilitel' na poluprovodnikovyykh triodakh s neposredstvennoy svyaz'yu" ("Transistorized amplifier with direct coupling"), Radiotekhnika, 1958, v. 13, no. 2]. The power amplification factor of this circuit is:

$$K_{p3} = \frac{k_{11}^2 k_{12}^2 r_{gen} R_{div} R_1^2 Z_1}{(r_{gen} + Z^*) \left[\sqrt{(R_{div} + R_{inpl})^2 + \left(\frac{k_{11}}{\omega C_2}\right)^2} \right] \times (R_y + k_{12} Z_1)^2 \sqrt{R_{inpl}^2 + \left(\frac{k_1}{\omega C_2}\right)^2}} \quad (19)$$

The gain is of the order of 40 db (with an input resistance of about 1 kilohm). The author examines next the five following circuits and calculates the power amplification factor for each of these circuits: 1) A two-stage amplifier with direct interstage coupling (symmetrical transistor types being used). The gain is here of the order of 50 db. The input resistance varies within wide limits. 2) A two-stage amplifier with transformer coupling. The average gain is here 60 db. 3) A three-stage amplifier with direct interstage coupling, using the

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S/106/61/000/008/004/006

A055/A12"

Selecting transistorized amplifier

same type of transistors. The gain is about equal to 75 db. 4) A three-stage amplifier with direct interstage coupling, using alternately transistors of different types. The average gain is, in this case, 85 db. 5) A five-stage amplifier with direct interstage coupling, using transistors of the same type. The gain, in this case, is usually of the order of 110 ÷ 115 db. There are 8 figures and 7 Soviet-bloc references.

SUBMITTED: May 3, 1960

[Abstracter's note: The following subscripts are translated in text and formulae: gen (generator) stands for Γ and γ ; l (load) stands for H; s (signal) stands for C; div (divider) stands for δ ; inp stands for *br.*]

Card 5/5

5/146/62/005/001/003/011
D234/D302

AUTHORS: Nikolayenko, N.S. and Redotov, V.P.

TITLE: A semiconductor triode in the regime of transformation of small d.c. into a.c.

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 1, 1962, 16-26

TEXT: The authors determine the residual voltage and current and the resistance between the emitter and collector for the case stated and give a relation between these parameters and the current amplification factor and inverse transition currents. Temperature dependence of the parameters in a transformation regime is analyzed. Theoretical and experimental values of several dependences are compared. It is concluded that comparatively good stabilization in a wide temperature range is only possible when the load resistance is of the order of several hundreds of ohms or less. For high resistances silicon triodes are recommended. There are 5 figures and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The references

Card 1/2

S/146/62/005/001/003/011
D234/D302

A semiconductor triode in ...

to the English-language publications read as follows: J.J.S. Ebers, and J.J.L. Moll, Large-signal behaviour of junction transistors. Proc. I.R.E., 1954, Dec. 142.; E. Steele, Theory of a p-n-p diffused junction transistors. PIRE, 1952, 40, 1424. ✓

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering im. v.I. Ul'yanov (Lenin))

SUBMITTED: February 27, 1961

Card 2/2

NIKOLAYENKO, N. S.

Standard semiconductor amplifier for automatic potentiometers
and bridges. Priborostroenie no.10:9-11 0 '62.
(MIRA 15:10)

(Transistor amplifiers)

NIKOLAYENKO, N.S.; FEDOTOV, V.P.

Measuring transistorized d.c. converter and its use.
Priborostroenie no.11:18-20 N '62. (MIRA 15:12)
(Electric current converters)

45658

S/115/63/000/001/014/017
E192/E382

9.2520

AUTHOR: Nikolayenko, N.S.

TITLE: Design principles of "hybrid" amplifiers

PERIODICAL: Izmeritel'naya tekhnika, no. 1, 1963, 42 - 43

TEXT: High input impedance (greater than 10^7 ohm) in a transistor amplifier can be achieved by preceding it with a vacuum tube amplifying stage. A possible circuit for such a "hybrid" amplifier is shown in the figure. The input tube is a directly heated sub-miniature pentode, type 1*175 with a heater of 1.2 V and 60 mA. The tube operates at an anode voltage of 15 V, a cathode current of 1.7 mA and grid bias of -0.1 V. The input tube is connected as a cathode-follower with a grid resistance of $2\text{ M}\Omega$ and $R_1 = 56\ \Omega$, $R_2 = 3\text{ k}\Omega$; its input resistance is therefore $10^8\ \Omega$ and output resistance $750\ \Omega$. The output is connected directly to the base of the first transistor stage. The circuit shown in the figure employs transistors, type П9А (P9A) and has a gain of about 5000. There is 1 figure. X

Card 1/2

S/146/63/006/001/001/014
D201/D308

AUTHORS: Nikolayenko, N. S. and Fedotov, V. P.

TITLE: Special features in the use of silicon transistors as d.c. to a.c. converters for small signals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 6, no. 1, 1963, 19-26

TEXT: The authors analyze germanium and silicon transistors from the point of view of their use as choppers in d.c. amplifiers and describe the methods of their selection and of the design of circuit components: A chopper circuit for a wide temperature range of operation, utilizing a silicon transistor with saturation voltage compensation is described. The theory and experimental investigation of the transistor characteristics show that, for small d.c. signal conversion, the silicon transistors give a better performance in the presence of a wide temperature range. They are much inferior, however, to germanium transistors where reproducibility, economy and simplicity of design are of importance. The use of silicon

Card 1/2

Special features in ...

S/146/63/006/001/001/014
D201/D308

transistors should, therefore, be restricted to converters operating at high ambient temperatures and in conjunction with d.c. sources having high internal resistance. There are 4 figures.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering im. V. I. Ul'yanov (Lenin))

SUBMITTED: November 25, 1961

Card 2/2

L 10264-67

ACCESSION NR: AP3000562

8/0109/63/008/005/0807/0813

AUTHOR: Nikolayenko, N. S.

44

TITLE: Operating conditions and amplification of compound-transistor circuits

SOURCE: Radiotekhnika i elektronika, v. 8, no. 5, 1963, 807-813

TOPIC TAGS: compound transistor, Soviet transistors

ABSTRACT: Effect of ambient temperature on the collector and emitter currents and load voltage is considered theoretically, and some experimental data is submitted. For a composite transistor of two P26 types, this affect is insignificant in the 20-80C range. Current gain (148) and input impedance (1,650 ohms) for the same compound transistor have been estimated and verified experimentally. It is indicated that for P105 type and a load of 1,000 ohms, the current gain is 240, power gain is 2,450 and input impedance 19,400 ohms. The use of compound transistor in various circuits is evaluated, and a comparison with a 2-stage transistor amplifier is given. Orig. art. has: 37 equations, 6 figures, and 1 table.

Card 1/2

L 10284-63
ACCESSION NR: AP3000562

ASSOCIATION: none

SUBMITTED: 21May62

SUB CODE: 00

DATE ACQD: 30May63

NO REF SOV: 007

0
ENCL: 00

OTHER: 002

ja/hh
Card 2/2

NIKOLAYENKO, N.S.

Transistor stage with a composite feedback. Radiotekhnika 13
no.10:30-34 0 '63. (MIRA 16:12)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva
radiotekhniki i elektrosvyazi im. A.S.Popova.

L 6739-65 AFEP/ESD(c)/ASD(u)-5/AFWL/ESD(t)/RAEM(t)
ACCESSION NR: AP4044178 S/0119/64/000/008/0001/0003

AUTHOR: Nikolayenko, N. S. (Candidate of technical sciences) 43

TITLE: Transistorized amplifiers supplied by a pulsating current

SOURCE: Priborostroyeniye, no. 2, 1964, 1-3

TOPIC TAGS: amplifier, transistorized amplifier, single ended amplifier, push pull amplifier

ABSTRACT: Power relations in a single-ended, pulsating-current-supplied, class B transistorized amplifier are analyzed. An efficiency of up to 95% is held possible for this mode of operation. The use of transistors in push-pull circuits of both (differentiated-load and differentiated-supply) types is regarded as impractical because of the strict symmetry requirements of the circuit. A single-ended, tuned-load-circuit amplifier is recommended for practical application, such as measuring instruments, automatic devices, etc.; a common-

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L 6739-65

ACCESSION NR: AP4044178

collector circuit is recommended for supplying servomotors. Calculation of the gain in class B or AB amplification with pulsating-current-supplied collector circuit can be performed by the conventional grapho-analytical methods used for transistorized amplifiers. "The above calculation was verified and corroborated by experiments." Orig. art. has: 3 figures and 14 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 001

Card

2/2

ACCESSION NR: AT4040775

S/2657/64/000/011/0037/0054

AUTHOR: Nikolayenko, N. S.

TITLE: Analysis of feedback circuits for the stabilization of transistor amplifier operation

SOURCE: Poluprovodnikovyye pribory i ikh primeneniye; sbornik statey, no. 11, 1964, 37-54

TOPIC TAGS: feedback, feedback circuit, semi-conductor device, amplifier, transistor amplifier, amplifier stabilization, negative feedback

ABSTRACT: The author notes that the operation of transistorized amplifiers with direct interstage coupling can be stabilized rather well within the temperature range determined by the working temperatures of the transistors. However, the spread in the values of the circuit resistances used in the mass production of these amplifiers gives rise to deviations from the design values which may be quite considerable (even when using resistances with a tolerance of $\pm 5\%$) and which may lead to impairment or complete loss of amplifier operability. If direct interstage coupling is employed, the stability of transistor amplifiers can be increased substantially by introducing parallel-type negative feedback circuits.

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ACCESSION NR: AT4040775

The author divides these circuits into the following classes: "collector - base" feedback; "collector - emitter" feedback; "emitter - base" feedback; and "emitter - emitter" feedback. Analysis shows that the use of the last two types is preferable, since dc feedback from the collector leads to the necessity of inserting additional decoupling filters, lowers the gain of the stage and increases the current consumption in the circuitry. The present article, therefore, contains a comparative analysis of five possible cases of three-stage transistor amplifiers with circuitry containing negative feedback of the parallel type fed from the emitters of the subsequent stages. Possible versions of the circuitry of 3-stage amplifiers incorporating one or two feedback systems are studied. The author also derives expressions which make possible the analysis of the stability of the working modes of the amplifier in the event that the actual values of the resistances employed deviate from the rated values. Experimental material is presented which both confirms the accuracy of the analysis and indicates the degree of stability in the amplifier modes in the face of variations in ambient temperature. The use of the analytical expressions and the results of the comparative circuit analysis given in this paper will make it possible, in each individual instance involving transistor amplifier design, to employ the proper feedback circuits for the best stabilization of the working modes of the transistors. Orig. art. has: 4 tables, 6 figures and 69 formulas.

Card 2/3

ACCESSION NR: AT4040775

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: EC

NO REF SOV: 002

ENCL: 00

OTHER: 000

Card 3/3

NIKOLAYENKO, N.S.

Method for designing transistor amplifiers with multiloop
feedback. Radiotekh. i elektron. 9 no.4:693-709 Ap '64.
(MIRA 17:7)

L 1970L-65 (RETR/ESD(1))
ACCESSION NR: AP-047813

S/0108/64/019/010/0047/0055

AUTHOR: Nikolayenko, N. S. (Active member)

TITLE: Parallel feedback in transistorized amplifiers with direct coupling between stages

SOURCE: Radiotekhnika, v. 19, no. 10, 1964, 47-55

TOPIC TAGS: transistorized amplifier, negative feedback transistorized amplifier

ABSTRACT: D-c operating conditions in direct-coupled multistage amplifiers depend on the spread of values of the resistors used in the circuit. To overcome this shortcoming, a parallel d-c feedback in one of the stages is suggested. Design formulas for Ge- and Si-transistor 2- and 3-stage amplifiers are developed; the effect of the parallel feedback on the amplifier gain is taken into account. It is found that amplifiers with a parallel-feedback loop from an even-

Card 1/2

L 1978:1-65

ACCESSION NR: AP4047813

stage common emitter to the base of the first transistor have the highest stability. Such amplifiers are least sensitive to transistor-parameter spread, resistor off-rating, and ambient temperature. Experimental corroboration is claimed (no data supplied). Orig. art. has: 4 figures and 72 formulas.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 05Mar62

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 002

Card 2/2

MAKSYMA, Nikolay Sergeyevich; N.Y. IASHKIN, Nikolay
Ivanovich, data., reizenent; MAKSYMA, Nikolay
Ivanovich, data., reizenent; IASHKIN, N.Y., data.,
reizenent.

Design of transistor amplifiers for monitoring of
praktirovanie tranzistornykh ustroystv. Moskva,
ustroystv. Moskva, Energiia, 1965. 100 p. (1965).

PIROZHENKO, V.Kh., inzh.; LINCHEVSKIY, G.V., inzh.; NIKOLAYENKO, N.T., inzh.

Automatically controlled mine traction substation using transistors.
Gor. zhur. no.5:69-70 My '63. (MIRA 16:5)

1. Gosudarstvennyy institut po proyektirovaniyu po dobyche i
obogashcheniyu rud, g. Krivoy Rog.
(Electric substations)

PIROZHENKO, V.Kh.; LINCHEVSKIY, G.V.; NIKOLAYENKO, N.T.

Automatic mine traction substation equipped with semiconductors.
Avtom. i prib. no.4:10-13 O-D '63. (MIRA 16:12)

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oborudovaniya po dobyche i obogashcheniyu rud.

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NIKOLAYENKO, N.V.
BARANOV, V.G.; BLAGOSKLANNAYA, Ya.V.; DAVYDOVSKIY, N.B.; LOSKUTOVA, Ye.A.; and
NIKOLAYENKO, N.V.

"The Nervous Factor in Pathogenesis of Thyrotoxicosis."

report to be submitted at the 4th Intl Symp Conference, London, England, 1-4 Jun 1971.

L 11645-66 ENT(1)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EMA(h)/

ACC NR: AP6001595 SOURCE CODE: UR/0120/65/000/006/0205/0206

44,55 EMA(c)/ETC(m) LJP(c) JD/W/HM/OG

AUTHOR: Nikolayenko, O. K.; Bulgakov, Yu. V.; Tikhomirov, M. V. 44,55

ORG: Scientific-Research Physicochemical Institute, Moscow 44,55
(Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: A simple pump for obtaining an ultrahigh vacuum 21,44,55 63 62 B

SOURCE: Pribery i tekhnika eksperimenta, no. 6, 1965, 205-206

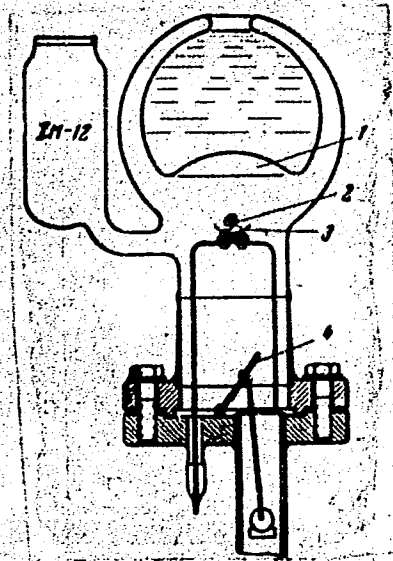
TOPIC TAGS: high vacuum pump, vacuum technique

ABSTRACT: A titanium nitrate pump is described. It is made of glass and was designed for obtaining an ultrahigh vacuum of about 10^{-9} tor in a small limited space. The operation of the pump is based on the abnormal sorption of gases evaporated by titanium at temperatures lower than -170°C . A glass vacuum envelope with an interposed Kovar alloy connection was soldered to a flange made of stainless steel. A cross section of the pump is shown in Fig. 1. A ball-shaped surface (1) covered by a titanium film and cooled by liquid nitrogen (oxygen) serves as a pumping element. The electrically heated spiral (2) made of 0.7 mm molybdenum wire with a titanium coating is used as a titanium evaporator. The screen (3) prevents the discharge of titanium into

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ACC NR: AP6001595



the vacuum. The valve (4) separates the glass envelope from the other part of the vacuum system. The operation of the pump is briefly explained. The pump can operate during 100 hours without replacing the spiral. The consumption of liquid nitrogen was one liter per hour. Orig. art. has: 1 figure. [22]

Fig. 1. Ultrahigh-vacuum pump

seal

17

SUB CODE: 13 / SUBM DATE: 13Oct64 / ORIG REF: 003 / ATD PRESS: 4175

Card 2/2

NIKOLAYENKO, P. T.

NIKOLAYENKO, P. T.: "The Plan of the first semester of the study of the physics course in secondary school." Moscow, 1951. Moscow City Institute of Education V. I. Potapkin, Chair of Physics Department. A candidate for the Degree of Candidate of Pedagogical Sciences.

At: Knizhnaya Lektora No. 1, 1. November 1955. Moscow.

AUTHOR: Varnavskikh, A.P., Nikolayenko, P.T. SOV-47-58-5-17/28

TITLE: Two Experiments in Vibratory Motion (Dva opyta po kolebatel'-nomu dvizheniyu)

PERIODICAL: Fizika v shkole, 1960, Nr 5, pp 61-62 (USSR)

ABSTRACT: Elastic oscillations can be well demonstrated with the aid of a vertical spring pendulum to obtain slowly dying oscillations with great periods ($T = 2 - 3$ sec). However, the influence of the weight of the oscillating body makes it impossible to show the change in the elastic force with respect to time. The device excludes the influence of weight. This is accomplished by turning the dial of the demonstration dynamometer until the needle is at zero. For the other experiment a detailed explanation is given in the article. There are 3 diagrams.

1 Vibrations--Analysis 2. Oscillations--Analysis

Card 1/1

L 08363-67

ACC NR: AR6028138

SOURCE CODE: UR/0058/66/000/005/D096/D096

2/

AUTHOR: Nikolayenko, P. T.; Prorvin, A. I.

TITLE: . Investigation of intensity distribution in the wing of a Rayleigh line

SOURCE: Ref. zh. Fizika, Abs. 5D758

REF. SOURCE: Uch. zap. Kemerovsk. gos. ped. in-t, vyp. 9, 1965, 349-353

TOPIC TAGS: Rayleigh scattering, spectral line, line intensity, molecular spectrum, spectral distribution

ABSTRACT: The authors investigated the distribution of the intensity in the wing of a Rayleigh line in the frequency region $30 - 120 \text{ cm}^{-1}$ for anisol, benzene, and O-xylol excited by the 4358 and 4047 Å mercury lines. The experimental data are interpreted on the basis of the concept of two types of molecular motions causing the change in the frequency: 1) elastic oscillations relative to the equilibrium position; 2) Brownian rotary motion with a random-force power spectrum that depends on the frequency. For benzene and eight of its derivatives, the authors have determined the characteristic reorientation times, which have an order of magnitude 10^{-13} sec . V. Khartsiyev. [Translation of abstract]

SUB CODE: 20

Card 1// nst

L 27893-66 EWT(m)/EPF(c)/EWP(j)/T RM
ACG NR: AP5025044 SOURCE CODE: UR/0286/65/000/016/0086/0086
AUTHORS: Nikolayenko, R. I.; Rumyantseva, L. V.; Polikanin, N. A. 13
ORG: none B.
TITLE: A method for obtaining polyphenylsiloxane resin. Class 39, No. 173956 15
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 86
TOPIC TAGS: resin, polyphenylsiloxane, toluol, furyl alcohol
ABSTRACT: This Author Certificate presents a method for obtaining polyphenylsiloxane resin by hydrolizing phenyltrichlorsilane in a mixture of water and toluol. To obtain a thermoreactive resin, furyl alcohol is added to the hydrolizing mixture.
SUB CODE: MT, GC/ SUBM DATE: 09Jun62/ 1 ORIG REF: 000/ OTH REF: 000

Card 1/1 20

UDC: 678.84

NIKOLAYENKO, S.S., inzh.; YES'KOV, A.S., inzh.; OTRICH, A.S., inzh.;
MAKSIMCHUK, A.A., inzh.; VESELOV, Yu.A., inzh.

Deepening the shaft of the Kordintern mine. Zakht. 31. 1977.
6 no. 120-21. J1 12.

1. Dni toprokloveshchenskogo upravleniya Kordintern (for Nikolayenko). 2. Krivorezhskiy (for Yes'kov). 3. Nauchno-issledovatel'skogo instituta (for Otrich). 4. Nauchno-issledovatel'skogo instituta (for Maksimchuk). 5. Nauchno-issledovatel'skogo instituta (for Veselov).
(Krivoy Rog Basinschaft shakhty)

NIKOLAYENKO, S. V.

4600. Nikolayenko, S. V. za uysokuyu kul'turu zemledehiya (rasskaz predserateyha kolkhoza im. voroshilova, glynyan. Rayona. lit zapis' f. zastavnogo. I'vov, kn.-zhurn. ied., 1954. 30s. 20sm. (-eredovoy opytvsem kolkhoznikam.) 3, 000 ekz. 40k.-na ukr. yaz.-(54-57871) 338.1k(47.743)

SO: Letopis' Zhrunal' nykh Statey, Vol.7, 1949

NEVEROVSKAYA, V.O. [Nevierovs'ka, V.O.]; NIKOLAYENKO, T.A. [Nykolaenko, T.O.];
ROYF, M.M.

New method for cutting garments. Leh.prom. no.4:45-46 O-D '62.
(MIRA 16:5)

1. Chernovitskaya trikotazhnaya fabrika No.1.
(Knit goods industry) (Garment cutting)

NIKOLAYENKO, V. A.

30V/6176

PHASE I BOOK EXPLOITATION

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences
USSR, Resp. Ed.

Deystvie vadernykh izlucheniv na materialy (The Effect of
Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR,
1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. P. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

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90
30V/6176

The Effect of Nuclear Radiation (Cont.)

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research organization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ -radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

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The Effect of Nuclear Radiation (Cont.)

30V/6176

Batenin, I. V., V. A. Il'ina, V. K. Kritskaya, G. V. Kurdyumov,
and B. V. Sharov. Investigation of the Effect of Neutron
Irradiation on Thin Crystalline Structure and Properties of
Metals and Alloys

160

Annealed specimens (copper at 400°; iron and iron-nickel
at 600°; iron-chromium and iron-tungsten at 650°; and
chromium at 900°) were irradiated with neutron fluxes of
 $\sim 10^{22}$ and $\sim 10^{21}$ n/cm² at a temperature not exceeding
80° [C].

Karpukhin, V. I., and V. A. Nikolayenko. Remote Controlled
Installation for X-Ray Diffraction Analysis of Radioactive
Specimens

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Levitskiy, B. M., and Yu. A. Martynyuk. Installation for
X-Ray Examination of Highly Active Specimens

173

Sharov, B. V., I. V. Batenin, and A. N. Rudenko. X-Ray Unit
for Structural Investigation of Radioactive Materials

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- 4 -

The Effects of Nuclear Radiation (Cont.) SOV/6176

Pravdyuk, N. F., V. A. Nikolayenko, and V. I. Korpukhin.
Change in Lattice Parameters of Diamond and Silicon Carbide
During Irradiation 184

Abdullayev, G. B., and M. A. Talibi. On One Method of Using
Cadmium Sulfide Photoresistors in Recording X- and Y-ray
Dosimeter 189

Konobeyevskiy, S. T., B. M. Levitskiy, L. D. Panteleyev, K. P.
Dubnovin, V. I. Kutaytsev, and V. N. Konev. X-Ray Examina-
tion of Transformations in Copper-Tin Alloy Under Neutron
Irradiation

Levitskiy, B. M., and L. D. Panteleyev. X-Ray Examination of
the Relaxation of Internal Microstresses in Cold-Worked
Metals Under Neutron Irradiation 209

Konobeyevskiy, S. T., N. F. Pravdyuk, Yu. I. Pokrovskiy, and
V. I. Vikhrov. Effect of Neutron Irradiation on Internal
Friction in Metals 219

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